Big Pumps Equal Big Cost Savings

RICHLAND, Wash., March 5, 1996 -- The U.S. Department of Energy has authorized Westinghouse Hanford Company to proceed with a cost-cutting design of a new system to enhance the removal of waste from double-shell, highly radioactive waste storage tanks.

The tanks are located on the U.S. Department of Energy's Hanford Site in Washington State and are managed by Westinghouse which is responsible for the safe storage of the waste until it can prepared for disposal.

"Large mixer pumps will be installed in Hanford's double-shell tanks to stir the thick sludges on the bottom of the tanks. This will prevent the solids from settling back to the bottom of the tank and will make it possible to move the waste out of the tanks when it comes time to dispose of the material," said Project Manager John Van Beek. He said the final design will save approximately $145 million compared to the original concept.

The project is also key to consolidating waste and freeing up needed storage capacity within the double-shell tanks. The mixer pumps will allow similar types of waste to be combined in fewer tanks. Double-shell tank storage capacity is essential to allow the safe removal of liquids from the older single-shell tanks to avoid the possibility of any new leaks to the surrounding soil. Up to 67 of the 149 single-shell tanks are known or suspected to have leaked approximately one million gallons waste into the surrounding soil.

Van Beek said the cost savings come from several sources and listed some examples. "We took a hard look at our assumptions and discovered we can make more use of common equipment than we originally expected. We found we can also use special, above-ground armored electrical cables to avoid the high cost of excavating trenches to bury the cables inside the tank farms."

Van Beek said other savings come from improved training, project management with fewer people and shortening the startup and review process. "These efforts cut two years off the schedule which also adds to the savings," said Van Beek.

"Gaining management approval to begin the final design was a lot easier when we were able to present a project that had reduced its cost by nearly forty percent," said Jackson Kinzer, U.S. Department of Energy's assistant manager for the Office of Tank Waste Remediation System.

The first phase of the project calls for installation of two 300-horsepower pumps in each of three tanks...102-SY, 105-AW and 102-AZ. Each pump is twice the size of the mixer pump previously installed in Hanford's well-known tank 101-SY which used to burp hydrogen. Eventually, seven more tanks will receive the twin-pump package as needed to meet the retrieval and disposal schedule.

The first portion of the detailed design work will be finished in October of this year. ICF Kaiser Hanford Company is the Architect, Engineering, Construction Management and base operations contractor on the Hanford Site.

The first set of mixer pumps is to be operating by August 1998.

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